

## ALOS Kyoto & Carbon Initiative Science Team meeting #15

January 26, 2011

1. Scenario requests acquisition status.
2. Acquisition status on a map
3. PLR acquisitions and BOS
4. Future plans
5. TDRSS

RESTEC/Kaoru Tsuzuku

# Scenario requests acquisition status (1/3)



## Scenario results for (Cycles 35-39 and Total)

Cycle35 FBD (2010/4/30~2010/6/14) Cycle36 FBD (2010/6/15~2010/7/30)

|         |       |                  | req[id] | req[scene] | obs[scene] | obs rate[%] | req[id] | req[scene] | obs[scene] | obs rate[%] |
|---------|-------|------------------|---------|------------|------------|-------------|---------|------------|------------|-------------|
| PALSAR  | Asce  | ALL              | 1414    | 28435      | 24666      | 87          | 2021    | 39971      | 31341      | 78          |
|         | Desce |                  | 30      | 121        | 116        | 96          | 163     | 654        | 517        | 79          |
|         |       | ScanSAR_Wetlands | 131     | 962        | 553        | 57          | 147     | 1007       | 710        | 71          |
| PRISM   | Desce | OB1+OB2          | 2629    | 310758     | 237921     | 77          | 3260    | 130646     | 98922      | 76          |
|         |       | Nadir            | 2629    | 109175     | 89535      | 82          | 3260    | 104139     | 80951      | 78          |
| AVNIR-2 | Desce |                  | 2399    | 49451      | 40110      | 81          | 3179    | 63691      | 45554      | 72          |

Cycle37 FBD (2010/7/31~2010/9/14) Cycle38 FBD (2010/9/15~2010/10/30) Cycle39 Open (2010/10/31~2010/12/15)

| req[id] | req[scene] | obs[scene] | obs rate[%] | req[id] | req[scene] | obs[scene] | obs rate[%] | req[id] | req[scene] | obs[scene] | obs rate[%] |
|---------|------------|------------|-------------|---------|------------|------------|-------------|---------|------------|------------|-------------|
| 2472    | 45690      | 34857      | 76          | 2677    | 47080      | 38303      | 81          | 1695    | 33471      | 27033      | 81          |
| 617     | 3274       | 3008       | 92          | 297     | 1532       | 1372       | 90          | 72      | 291        | 112        | 38          |
| 144     | 1003       | 752        | 75          | 147     | 1007       | 785        | 78          | 128     | 940        | 563        | 60          |
| 3034    | 121896     | 83460      | 68          | 2498    | 297643     | 186059     | 63          | 2019    | 234307     | 170904     | 73          |
| 3034    | 99776      | 68797      | 69          | 2498    | 107538     | 73911      | 69          | 2019    | 85667      | 69468      | 81          |
| 3053    | 59257      | 42301      | 71          | 2505    | 52957      | 37103      | 70          | 1933    | 40712      | 32150      | 79          |

## Total (Cycles 7-39)

|         |       |                  | req[id] | req[scene] | acq[scene] | acq rate[%] |
|---------|-------|------------------|---------|------------|------------|-------------|
| PALSAR  | Asce  | ALL              | 69403   | 1297435    | 1007969    | 77.7        |
|         | Desce |                  | 10720   | 62259      | 43674      | 70.1        |
|         |       | ScanSAR_Wetlands | 7226    | 43828      | 27800      | 63.4        |
| PRISM   | Desce | OB1+OB2          | 53624   | 4657584    | 3261514    | 70.0        |
|         |       | Nadir            | 42258   | 1810331    | 1296963    | 71.6        |
| AVNIR-2 | Desce |                  | 42583   | 838168     | 628502     | 75.0        |

Acquisition success rate 2010

(average cycles 35-39)

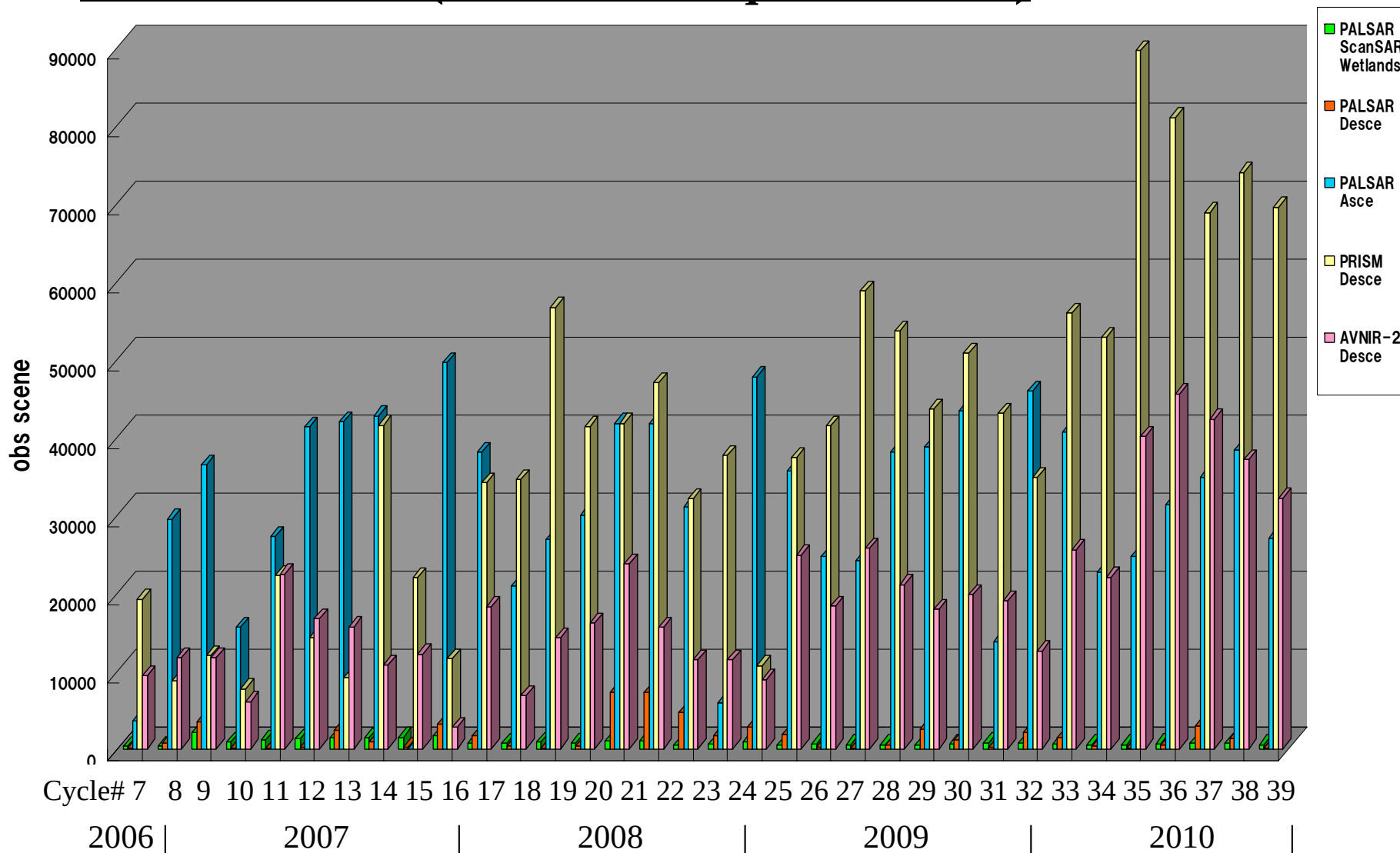
Ascending (FBS/FBD): 80.6%

ScanSAR Wetlands: 70.4%

# Scenario requests acquisition status (2/3)



## Scenario results (Number of acquired scenes)

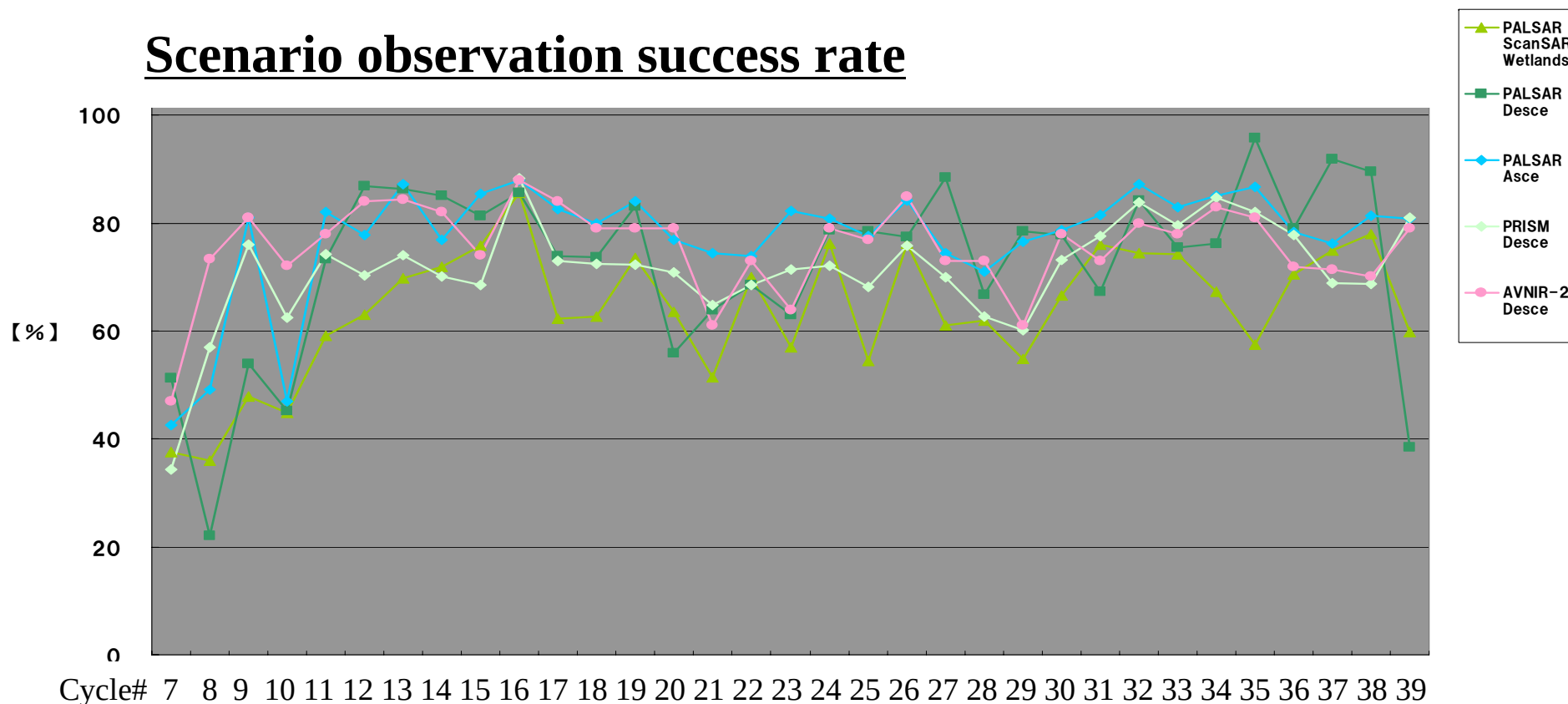


\*PRISM :nadir only

# Scenario requests acquisition status (3/3)

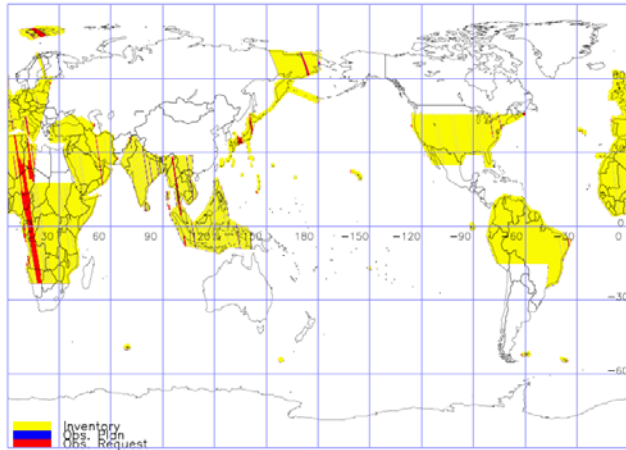


## Scenario observation success rate

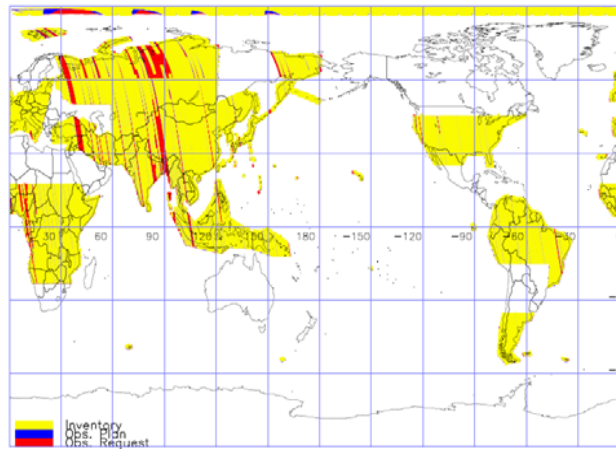


|         |            |            |         |            |            |         |            |            |         |            |            |
|---------|------------|------------|---------|------------|------------|---------|------------|------------|---------|------------|------------|
| Cycle7  | 2006/10/20 | 2006/12/4  | Cycle16 | 2007/12/8  | 2008/1/22  | Cycle25 | 2009/1/25  | 2009/3/11  | Cycle34 | 2010/3/15  | 2010/4/29  |
| Cycle8  | 2006/12/5  | 2007/1/19  | Cycle17 | 2008/1/23  | 2008/3/8   | Cycle26 | 2009/3/12  | 2009/4/26  | Cycle35 | 2010/4/30  | 2010/6/14  |
| Cycle9  | 2007/1/20  | 2007/3/6   | Cycle18 | 2008/3/9   | 2008/4/23  | Cycle27 | 2009/4/27  | 2009/6/11  | Cycle36 | 2010/6/15  | 2010/7/30  |
| Cycle10 | 2007/3/7   | 2007/4/21  | Cycle19 | 2008/4/24  | 2008/6/8   | Cycle28 | 2009/6/12  | 2009/7/27  | Cycle37 | 2010/7/31  | 2010/9/14  |
| Cycle11 | 2007/4/22  | 2007/6/6   | Cycle20 | 2008/6/9   | 2008/7/24  | Cycle29 | 2009/7/28  | 2009/9/11  | Cycle38 | 2010/9/15  | 2010/10/30 |
| Cycle12 | 2007/6/7   | 2007/7/22  | Cycle21 | 2008/7/25  | 2008/9/8   | Cycle30 | 2009/9/12  | 2009/10/27 | Cycle39 | 2010/10/31 | 2010/12/15 |
| Cycle13 | 2007/7/23  | 2007/9/6   | Cycle22 | 2008/9/9   | 2008/10/24 | Cycle31 | 2009/10/28 | 2009/12/12 | Cycle40 | 2010/12/16 | 2011/1/30  |
| Cycle14 | 2007/9/7   | 2007/10/22 | Cycle23 | 2008/10/25 | 2008/12/9  | Cycle32 | 2009/12/13 | 2010/1/27  | Cycle41 | 2011/1/31  | 2011/3/17  |
| Cycle15 | 2007/10/23 | 2007/12/7  | Cycle24 | 2008/12/10 | 2009/1/24  | Cycle33 | 2010/1/28  | 2010/3/14  | Cycle42 | 2011/3/18  | 2011/5/2   |

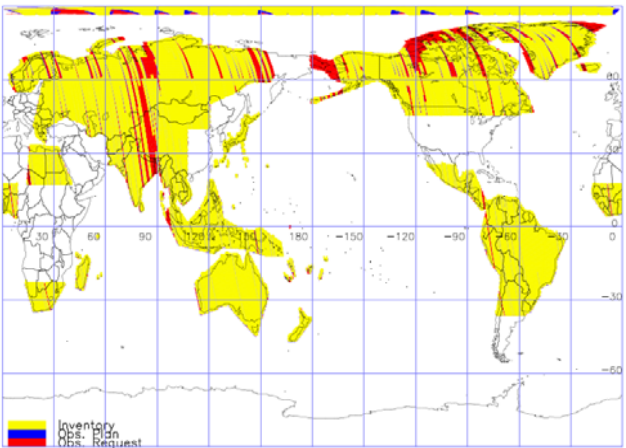
# Acquisition status on a map (1/3)



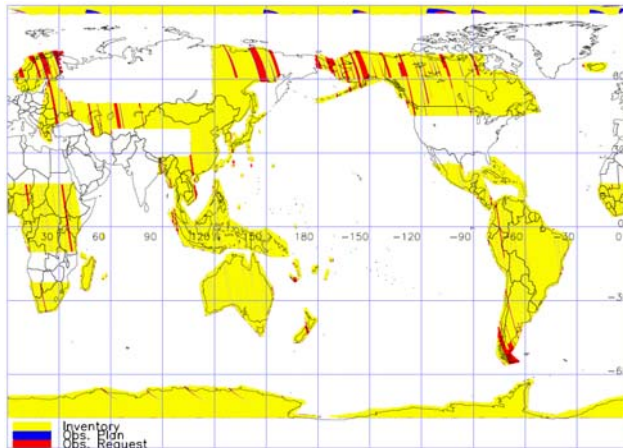
Cycle35 FBD (2010/4/30~2010/6/14)



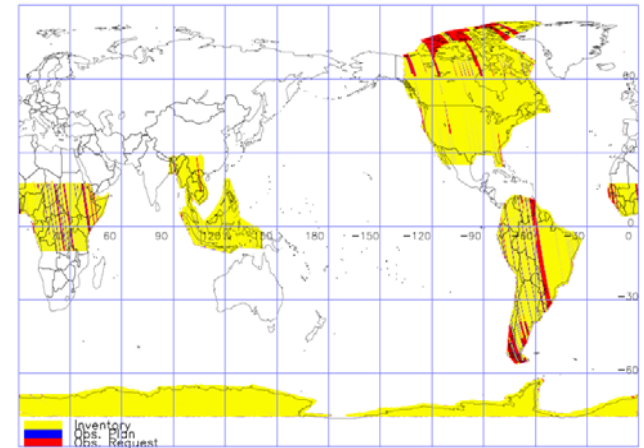
Cycle36 FBD (2010/6/15~2010/7/30)



Cycle37 FBD (2010/7/31~2010/9/14)



Cycle38 FBD (2010/9/15~2010/10/30)

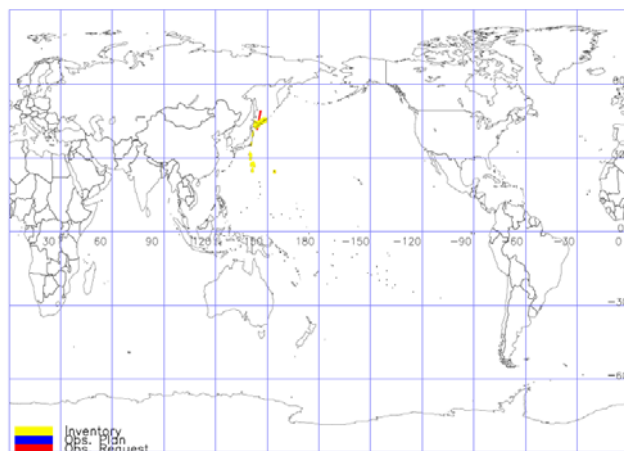


Cycle39 Open (2010/10/31~2010/12/15)

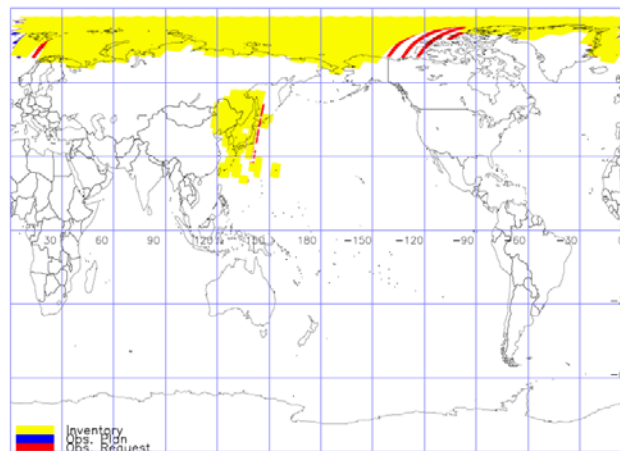
## PALSAR Ascending

- Requested, but not acquired
- Planned, but not yet acquired.
- Acquired OK

## Acquisition status on a map (2/3)



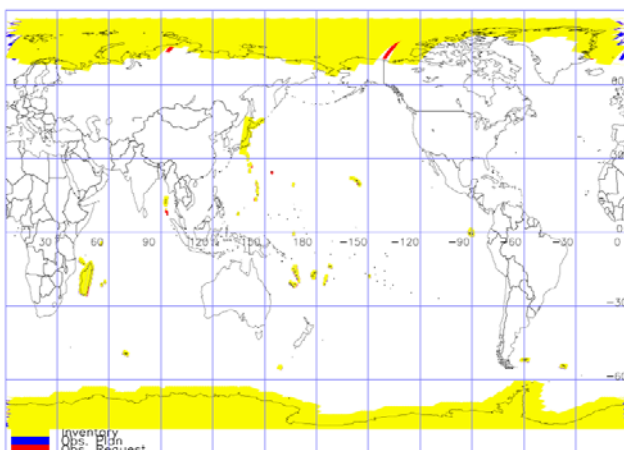
Cycle35 WB1 (2010/4/30~2010/6/14)



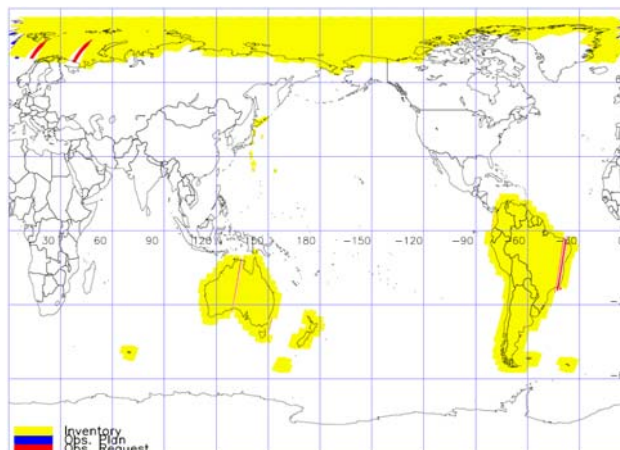
Cycle36 WB1 (2010/6/15~2010/7/30)

### PALSAR Descending

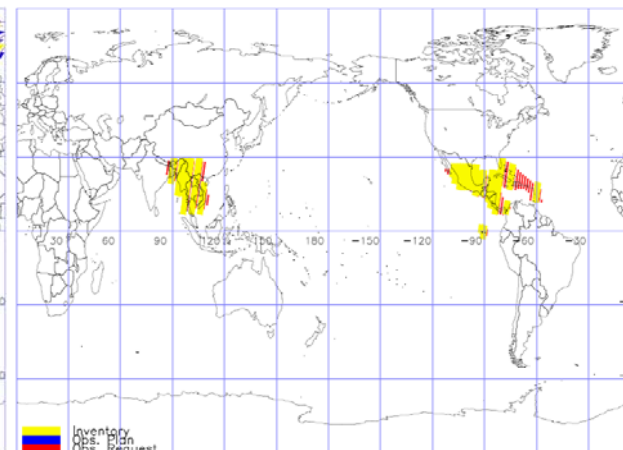
- Requested, but not acquired
- Planed, but not yet acquired.
- Acquired OK



Cycle37 WB1 (2010/7/31~2010/9/14)



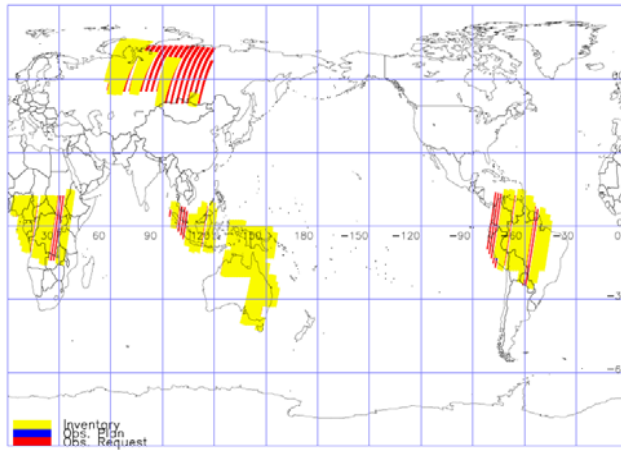
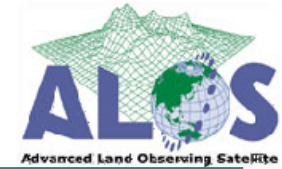
Cycle38 WB1 (2010/9/15~2010/10/30)



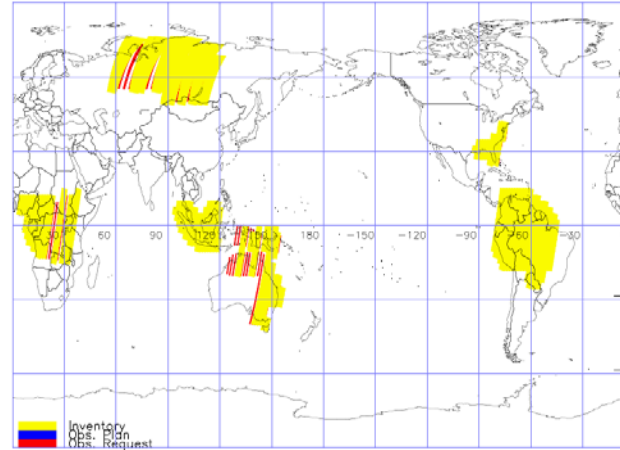
Cycle39 WB1 (2010/10/31~2010/12/15)



# Acquisition status on a map (3/3)



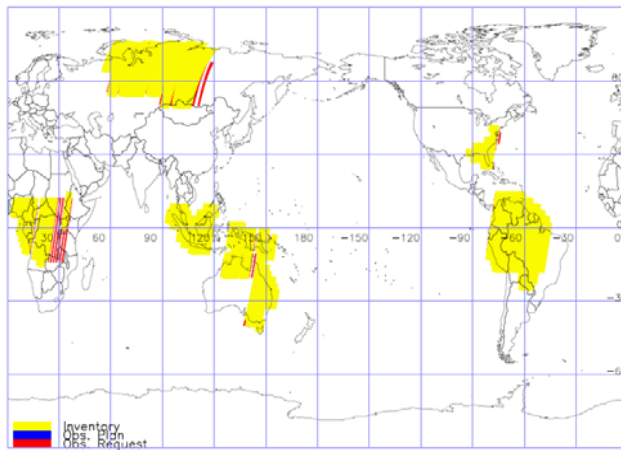
Cycle35 WB1 (2010/4/30~2010/6/14)



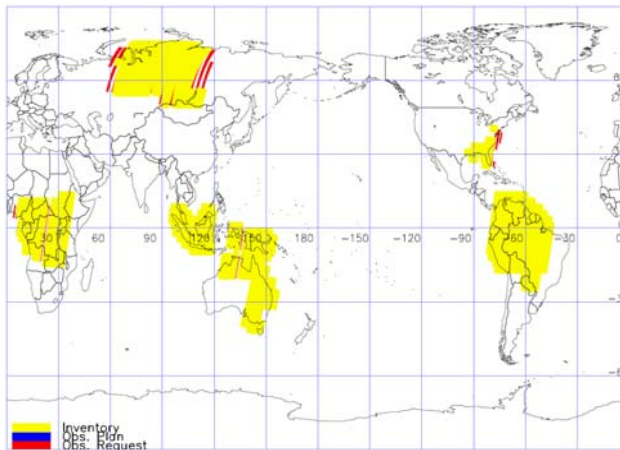
Cycle36 WB1 (2010/6/15~2010/7/30)

## PALSAR Descending (ScanSAR\_Wetlands)

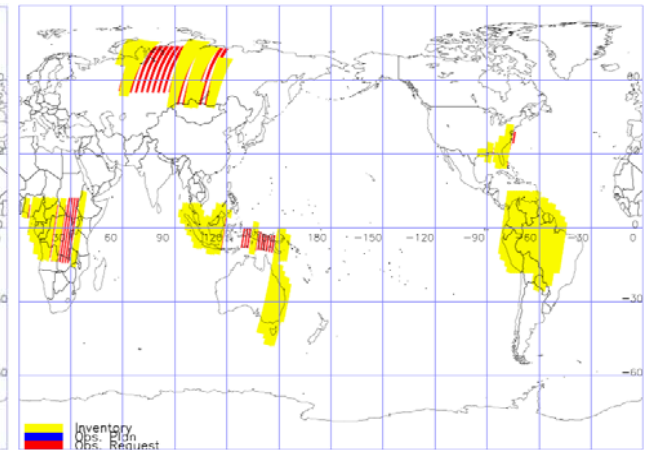
-  Requested, but not acquired
-  Planned, but not yet acquired.
-  Acquired OK



Cycle37 WB1 (2010/7/31~2010/9/14)

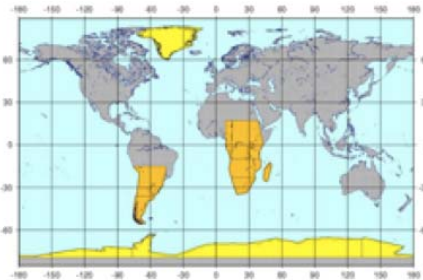


Cycle38 WB1 (2010/9/15~2010/10/30)

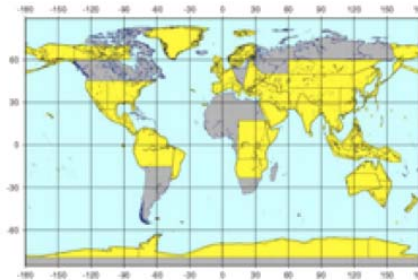


Cycle39 WB1 (2010/10/31~2010/12/15)

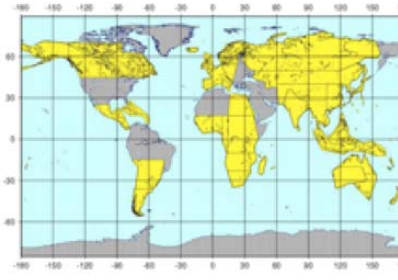
# PLR acquisitions affecting BOS



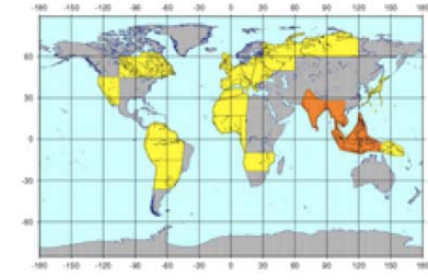
**CYCLE\_31 / 28-Oct.-2009**



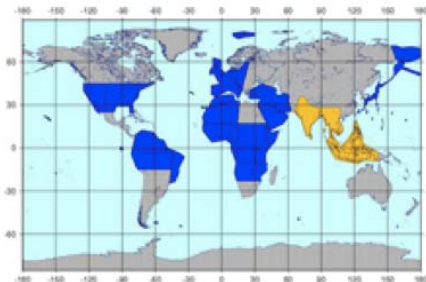
**CYCLE\_32 / 13-Dec.-2009**



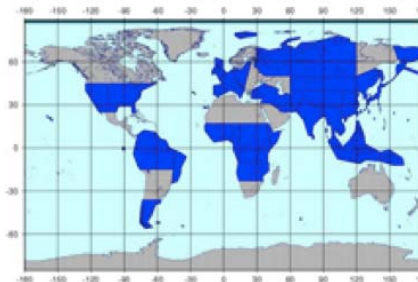
**CYCLE\_33 / 28-Jan.-2010**



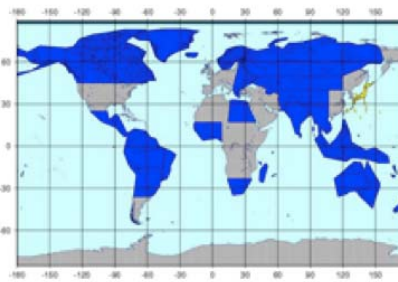
**CYCLE\_34 / 15-Mar.-2010**



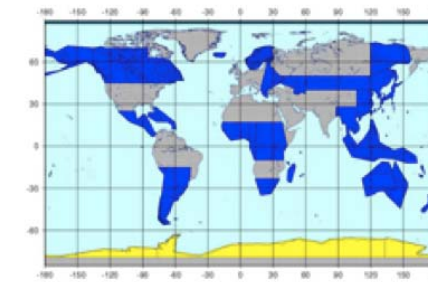
**CYCLE\_35 / 30-Apr.-2010**



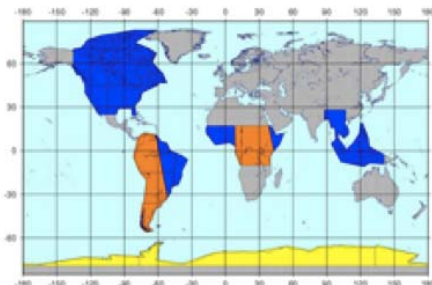
**CYCLE\_36 / 15-Jun.-2010**



**CYCLE\_37 / 31-Jul.-2010**



**CYCLE\_38 / 15-Sep.-2010**

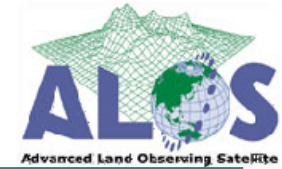


**CYCLE\_39 / 31-Oct.-2010**

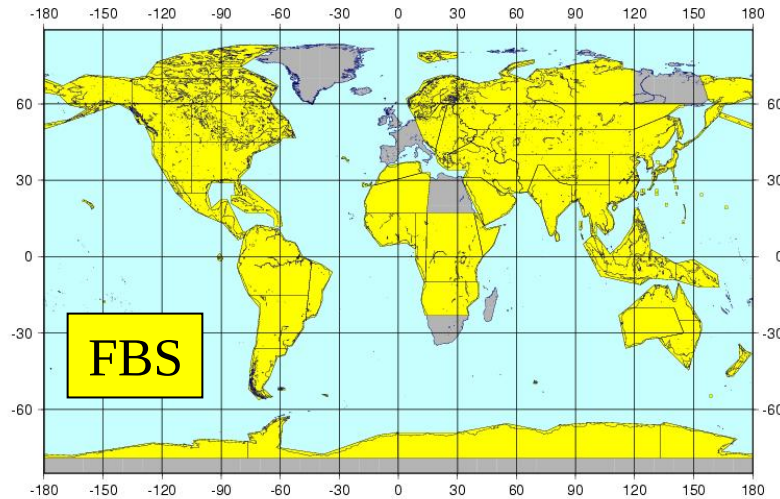
- The Northern and southern edge of the polarimetry acquisition areas could not be acquired due to mode change operations.
- There is no observation of polarimetry mode in cycles 44, 45, 46.



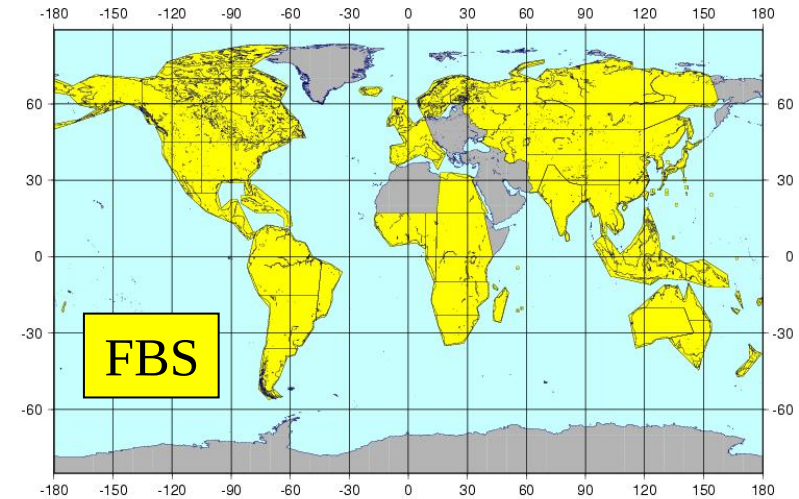
# Future plan: FBS & PLR Winter/spring 2011



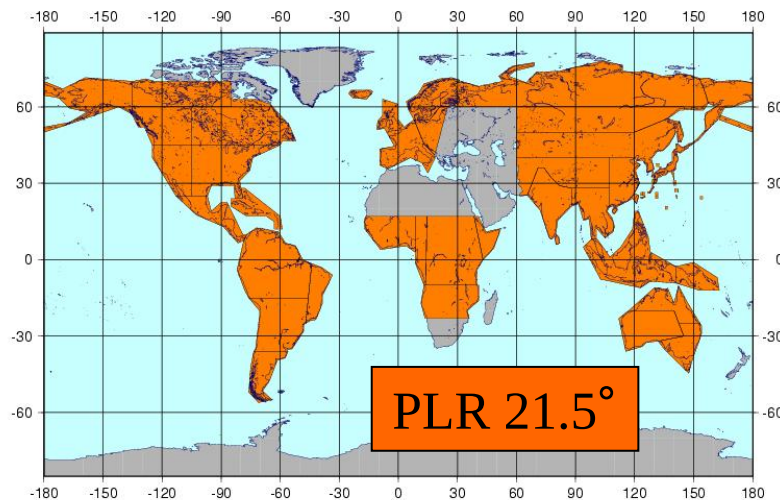
## PALSAR Ascending



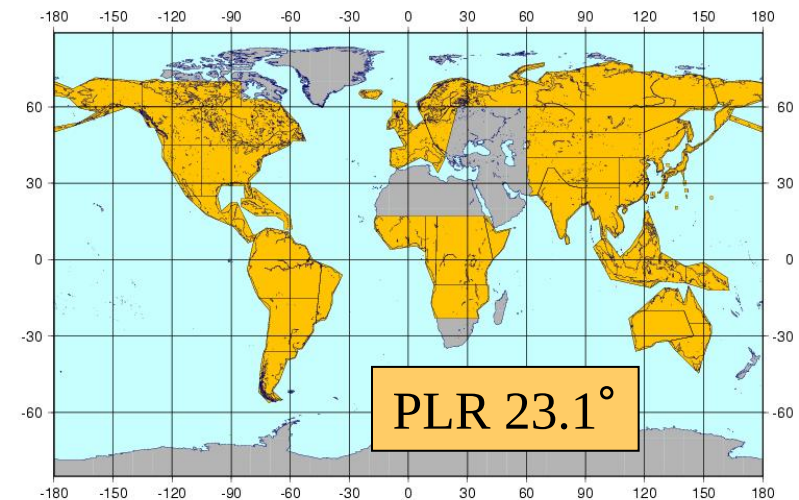
Cycle 40 (2010/12/16~2011/1/30)



Cycle 41 FBS (2011/1/31~2011/3/17)



Cycle 42 POL 21.5 (2011/3/18~2010/5/2)

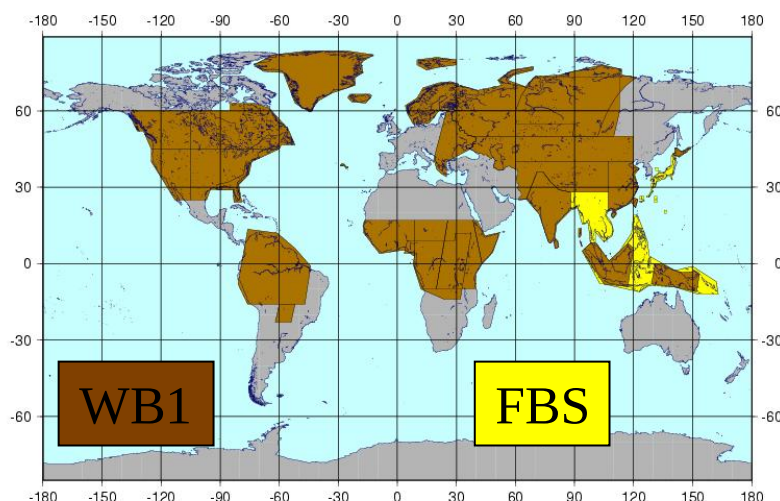


Cycle 43 (2011/5/3~2011/6/17)

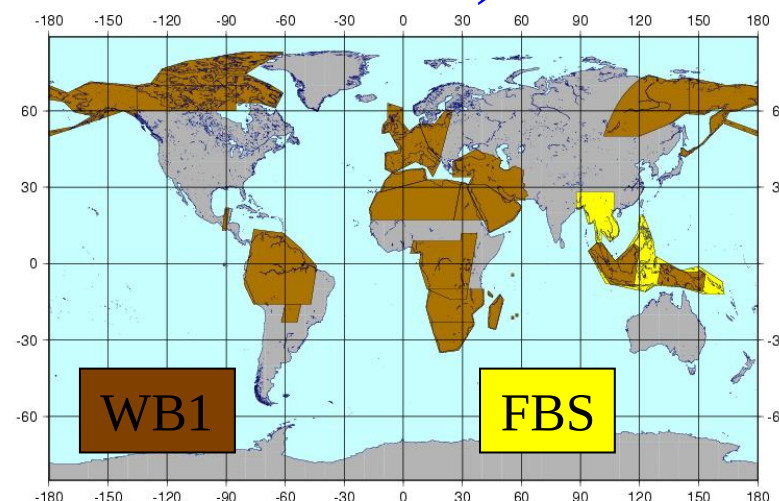
# Future plan: WB1 Winter/spring 2011



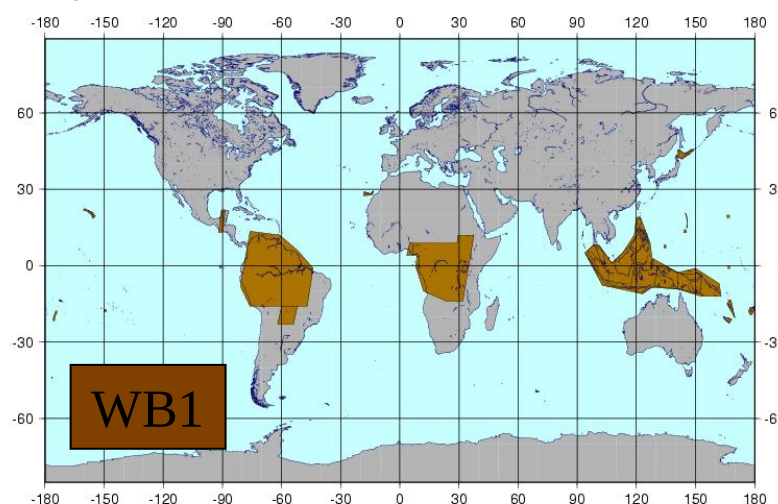
## PALSAR Descending (includes ScanSAR\_Wetlands)



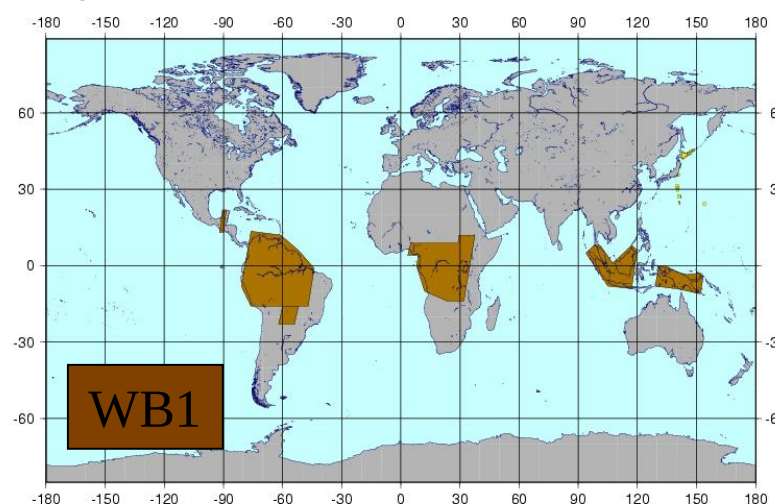
Cycle 40 (2010/12/16~2011/1/30)



Cycle 41 (2011/1/31~2011/3/17)

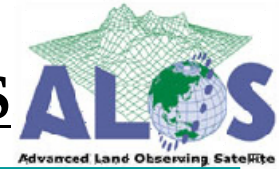


Cycle 42 (2011/3/18~2011/5/2)



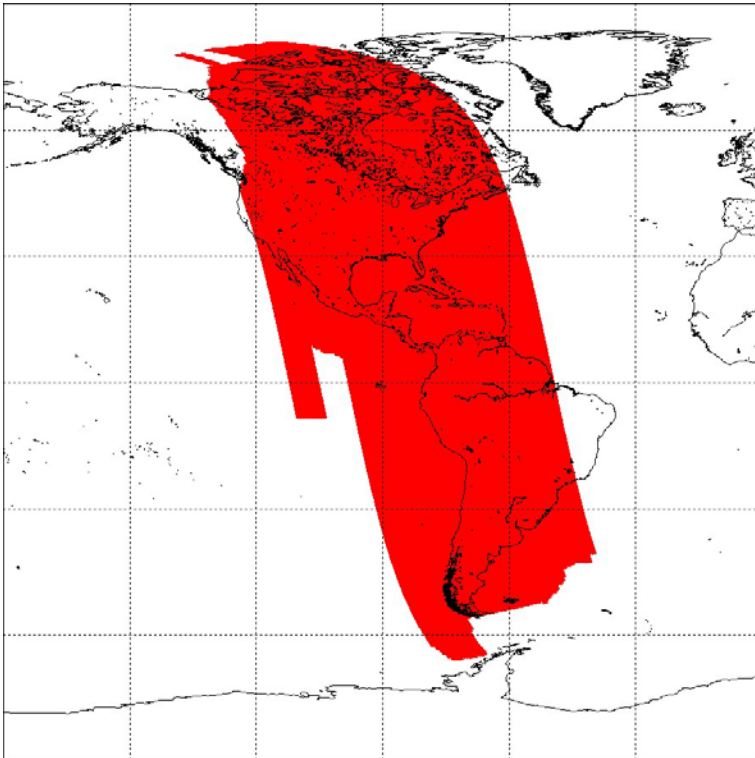
Cycle 43 (2011/5/3~2011/6/17)

# NASA Tracking and Data Relay Satellite System TDRSS

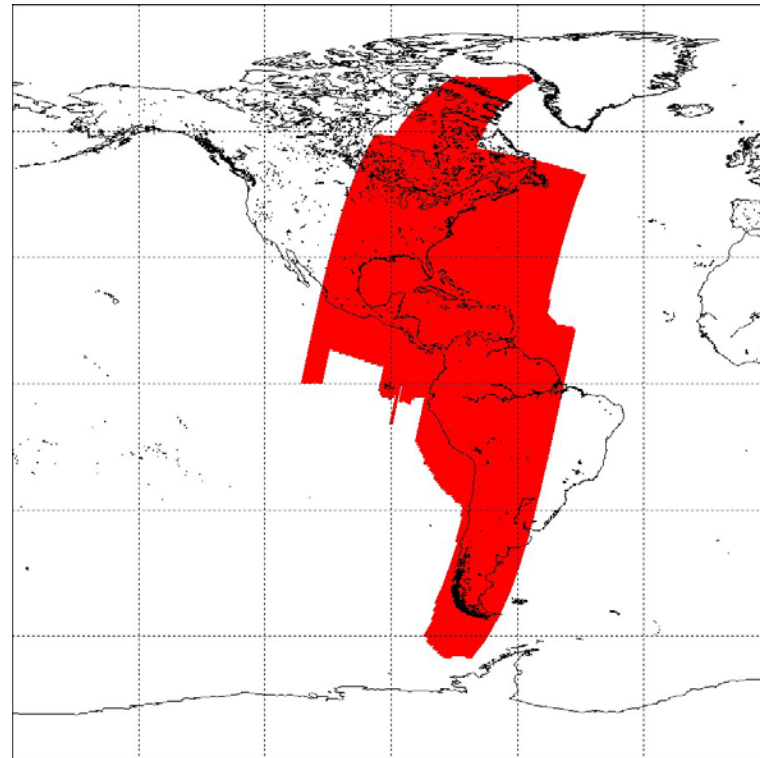


## TDRSS coverage

■ Ascending



■ Descending



JAXA/NASA collaboration

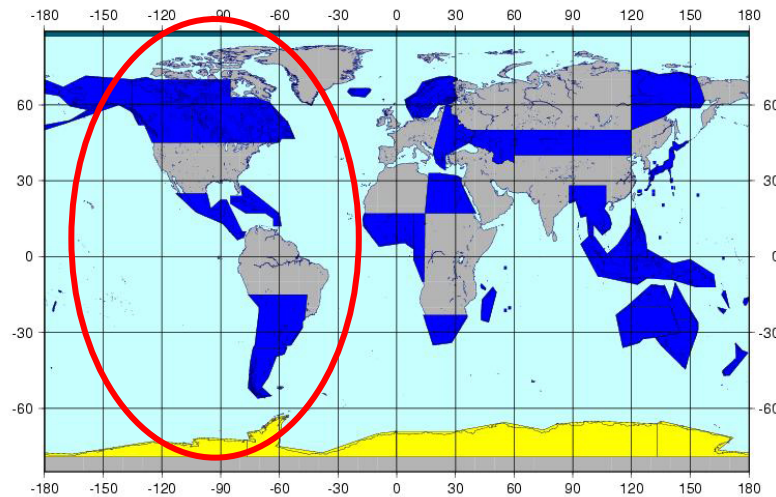
TDRSS operations started: 13 Apr. 2010

Downlink to White Sands, New Mexico (USA)

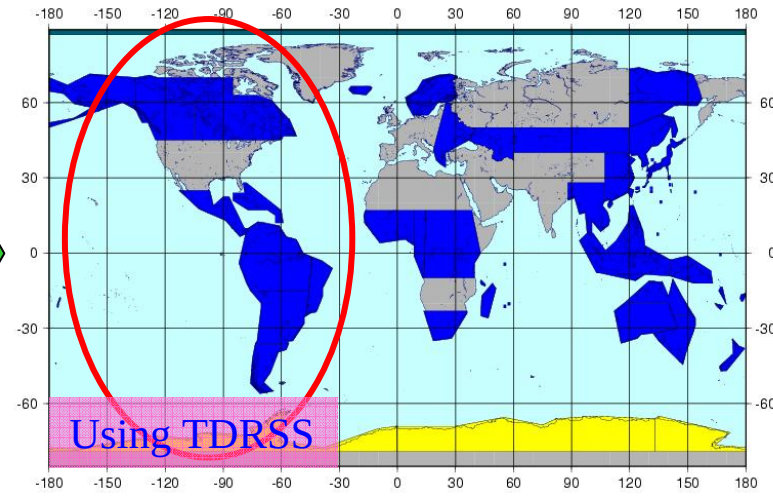
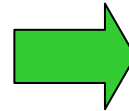


# TDRSS

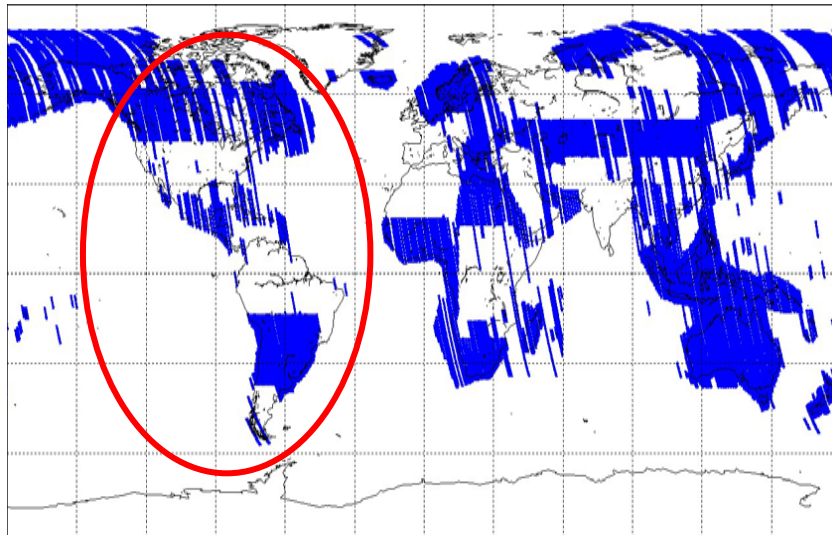
How has acquisition status changed?



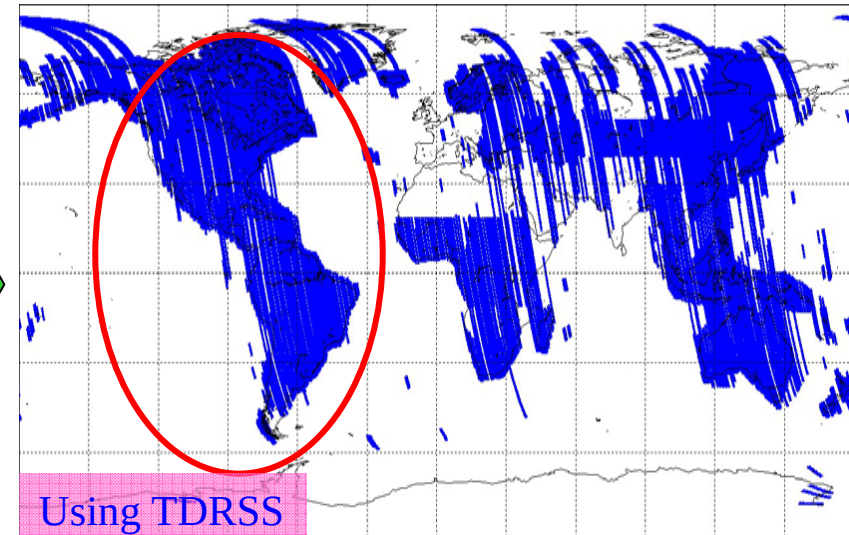
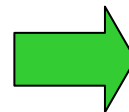
**BOS of Cycle22 FBD**



**BOS of Cycle38 FBD**

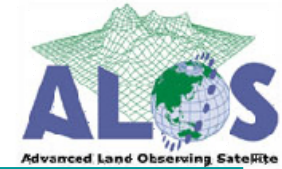


**Acquisition status Cycle22 FBD**



**Acquisition status Cycle38 FBD**

# Attention



- Operation of inclination control maneuver in April and June
  - Time duration of PALSAR instrument unavailable due to the maneuver has not been determined yet.
  - The position in the orbit will be changed after maneuver, and it may affect to InSAR and coherence analysis .